

## **REMARKS**

### **I. INTRODUCTION**

With the cancellation herein without prejudice of claims 21, 29 and 31, claims 18 to 20, 22 to 28, 30, and 32 to 38 are now pending in the present application. Claims 36 to 38 have been withdrawn from consideration. Claims 18, 30, 32 and 34 have been amended. In view of the following, it is respectfully submitted that all of the presently pending, non-withdrawn claims are allowable, and reconsideration is respectfully requested.

Applicants note with appreciation the acknowledgement of the claim for foreign priority and the indication that all certified copies of the priority documents have been received.

### **II. RESTRICTION REQUIREMENT**

Restriction to one of the following inventions was required:

Group I: Claims 18 to 35

Group II: Claims 36 to 38

Applicants hereby elect with traverse the claims of Group I, i.e., claims 18 to 35, for prosecution on the merits.

### **III. OBJECTION TO CLAIMS 18 to 35**

Claims 18 to 35 were objected to, as the phrase “a half of the sensor element facing the measuring gas” in claim 18 is allegedly unclear.

Claim 18 recites, inter alia, that the at least one sealing element surrounds the sensor element one of in a centered position along a longitudinal extension of the sensor element and a half of the sensor element facing the measuring gas.

Although this objection may not be agreed with, to simplify matters, claim 18 has been amended to recite that the at least one sealing element surrounds the sensor element **along a longitudinal extension of the sensor element at one of a centered position and a half of the sensor element facing the measuring gas.** This amendment makes it clear that the sealing element surrounds the sensor element at the center of its longitudinal extension or at the half of its longitudinal extension facing the measuring gas. Support for this amendment may be found, for example, on page 8, lines 15 to 21 of the Substitute Specification. Therefore, it is respectfully submitted that claim 18 is clear.

As for claims 19, 20, 22 to 28, and 30, which are ultimately dependent from claim 18 and were apparently objected to due to the alleged unclearness of claim 18, it is respectfully submitted that these claims are now clear.

As mentioned above, claims 21, 29 and 31 have been canceled, thereby rendering moot the objection with respect to these claims.

As for claims 32 and 34, it is respectfully submitted that these claims have been amended to remove their dependence from claim 18, and that therefore, the objection with respect to these claims is now moot.

As for claims 33 and 35, which are dependent from claims 32 and 34, respectively, it is respectfully submitted that the objection with respect to claims 33 and 35 is now moot for the reasons given above in support of claims 32 and 34.

#### **IV. REJECTION OF CLAIMS 18 to 22 AND 25 to 30 UNDER 35 U.S.C. § 102(b)**

Claims 18 to 22 and 25 to 30 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,453,726 B1 (“Gutierrez et al.”). It is respectfully submitted that Gutierrez et al. do not anticipate the present claims for at least the following reasons.

To reject a claim as anticipated under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Office Action does not meet this standard, for example, as to all of the features of the claims.

Claim 18 relates to a gas sensor for determining a physical property of a measuring gas, comprising: a sensor element arranged in a metal housing; and at least one sealing element which seals the sensor element and is arranged in a metal receptacle affixed to the metal housing; wherein the at least one sealing element surrounds the sensor element one of in a centered position along a longitudinal extension of the sensor element and a half of the sensor element facing the measuring gas.

While the rejections may not be agreed with, to facilitate matters, claim 18 has been amended to incorporate the features of claims 21, 29 and 31. In particular, claim 18 now provides that the metal receptacle adjoins a measuring gas chamber, **the metal receptacle is cup-shaped and has a closed configuration on one side**, a bottom of the metal receptacle includes a recess for receiving the sensor element, **an open end of the metal receptacle includes a section extending outward perpendicular to a longitudinal axis of the**

**metal receptacle, a sleeve-shaped section is connected to the section, and a closed side of the receptacle juts out in front of a connection of the metal receptacle to the metal housing in a direction of the measuring gas chamber.**

In contrast, inner shield (40) of the gas sensor of Gutierrez et al., which the Office Action equates to the metal receptacle (31) of Applicants' invention, does not have a closed configuration on one side. It is apparent from Fig. 1 of Gutierrez et al. that both ends of inner shield (40) are open.

Secondly, it is also apparent from Fig. 1 of Gutierrez et al. that neither open end of inner shield (40) includes a section, which extends outward perpendicular to the longitudinal axis of sensing element (80), and to which a sleeve-shaped section is connected.

Thirdly, it is additionally apparent from Fig. 1 of Gutierrez et al. that inner shield (40) does not have a closed side in the direction of sensor chamber (31).

Accordingly, it is respectfully submitted that Gutierrez et al. do not anticipate claim 18 for at least the foregoing reasons.

As for claims 19, 20, 22, 25 to 28, and 30, which ultimately depend from claim 18 and therefore include all of the features recited in claim 18, it is respectfully submitted that Gutierrez et al. do not anticipate these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 18. As for claim 30, it is additionally noted that this claim has been amended to correct its dependence from now-canceled claim 29.

As regards claim 30, Applicants respectfully submit that Gutierrez et al. do not anticipate this claim for at least the following additional reasons. Gutierrez et al. do not disclose, or even suggest, that a distance between a side wall of inner shield (40) and sensing element (80) is less than or equal to twice the lateral dimension of sensing element (80). In fact, it is apparent from Fig. 1 of Gutierrez et al. that the distance between inner shield (40) and sensing element (80) is substantially greater than twice the lateral dimension of sensing element (80). It is, therefore, respectfully submitted that Gutierrez et al. do not anticipate claim 30 for these additional reasons.

As mentioned above, claims 21 and 29 have been canceled, thereby rendering moot the rejection with respect to these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

**V. REJECTION OF CLAIMS 18 to 23, 29 AND 30 UNDER 35 U.S.C. § 102(b)**

Claims 18 to 23, 29 and 30 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,031,445 (“Kato et al.”). It is respectfully submitted that Kato et al. do not anticipate the present claims for at least the following reasons.

Claim 18 as amended provides that, inter alia, an open end of the metal receptacle includes a section, which extends outward perpendicular to a longitudinal axis of the metal receptacle, and to which a sleeve-shaped section is connected; and that a closed side of the receptacle juts out in front of a connection of the metal receptacle to the metal housing in a direction of the measuring gas chamber.

In contrast, Kato et al. do not disclose, or even suggest, that an open end of metal cap (26) (which the Office Action equates to the metal receptacle (31) of Applicants’ invention) has a section, which extends outward perpendicular to a longitudinal axis of metal cap (26), and to which a sleeve-shaped section is connected (see Fig. 5a of Kato et al.). In addition, metal cap (26) does not have a closed side that juts out in front of the connection (52) of metal cap (26) to housing (24). Accordingly, it is respectfully submitted that Kato et al. do not anticipate claim 18 for at least the foregoing reasons.

As for claims 19, 20, 22, 23 and 30, which ultimately depend from claim 18 and therefore include all of the features recited in claim 18, it is respectfully submitted that Kato et al. do not anticipate these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 18.

As mentioned above, claims 21 and 29 have been canceled, thereby rendering moot the rejection with respect to these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

## **VI. REJECTION OF CLAIMS 18 to 23, 29 to 32 AND 34 UNDER 35 U.S.C. § 102(a)**

Claims 18 to 23, 29 to 32 and 34 were rejected under 35 U.S.C. § 102(a) as anticipated by U.S. Patent No. 6,347,543 B1 (“Geier et al.”). It is respectfully submitted that Geier et al. do not anticipate the present claims for at least the following reasons.

Claim 18 as amended provides that, inter alia, the metal receptacle accommodating the at least one sealing element adjoins a measuring gas chamber, a bottom of the metal receptacle includes a recess for receiving the sensor element, and a closed side of the receptacle juts out in front of a connection of the metal receptacle to the metal housing in a direction of the measuring gas chamber.

In Fig. 5 of Geier et al., metal shell (18), which is equated to the metal receptacle of Applicants' invention, accommodates seal element (2) and compressing elements (1) and (3) but does not adjoin a measuring gas chamber. Secondly, the top of metal shell (18) (the part contacting compressing element (3)) includes a recess for sensor element (6), but the bottom of metal shell (18) contains no such recess. Thirdly, the closed side of metal shell (18), which is in contact with compressing element (3) does project away from weld (19), but not in the direction of a measuring gas chamber. Accordingly, it is respectfully submitted that Geier et al. do not anticipate claim 18 for at least the foregoing reasons.

As for claims 19, 20, 22, 23 and 30, which ultimately depend from claim 18 and therefore include all of the features recited in claim 18, it is respectfully submitted that Geier et al. do not anticipate these dependent claims for at least the same reasons more fully set forth above in support of the patentability of claim 18.

As regards claims 32 and 34, these claims were identified on page 9, section 11 of the Office Action as containing allowable subject matter and being allowable, if they were written in independent form to include all of the limitations of the base claim and intervening claims, and if the objection to claim 18 were overcome. It is respectfully submitted that claims 32 and 34 have been written in independent form to include all of the limitations of claim 18 (prior to amendment), and that the objection to claim 18 has been successfully overcome (see section III of this response). Therefore it is respectfully submitted that this rejection is moot with respect to claims 32 and 34.

As mentioned above, claims 21, 29 and 31 have been canceled, thereby rendering moot the rejection with respect to these claims.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

## **VII. REJECTION OF CLAIM 24 UNDER 35 U.S.C. § 103(a)**

Claim 24 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Geier et al. and U.S. Patent No. 6,673,224 B2 ("Shirai"), over the combination of Kato et al. and Shirai, and over the combination of Gutierrez et al. and Shirai. It is respectfully submitted that none of these combinations renders claim 24 unpatentable for at least the following reasons.

As regards the combination of Geier et al. and Shirai, claim 24 ultimately depends from claim 18 and therefore includes all of the features recited in claim 18. As

discussed above, Geier et al. do not disclose, or even suggest, all of the features recited in claim 18. Shirai is not relied upon for disclosing or suggesting all of the features of claim 18 not disclosed or suggested by Geier et al. Accordingly, it is respectfully submitted that the combination of Geier et al. and Shirai does not render unpatentable claim 24, which ultimately depends from claim 18.

As regards the combination of Kato et al. and Shirai, as discussed above, Kato et al. do not disclose, or even suggest, all of the features recited in claim 18. Shirai is not relied upon for disclosing or suggesting all of the features of claim 18 not disclosed or suggested by Kato et al. Accordingly, it is respectfully submitted that the combination of Kato et al. and Shirai does not render unpatentable claim 24.

As for the combination of Gutierrez et al. and Shirai, as discussed above, Gutierrez et al. do not disclose, or even suggest, all of the features recited in claim 18. Shirai is not relied upon for disclosing or suggesting all of the features of claim 18 not disclosed or suggested by Gutierrez et al. Accordingly, it is respectfully submitted that the combination of Gutierrez et al. and Shirai does not render unpatentable claim 24.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **VIII. REJECTION OF CLAIM 35 UNDER 35 U.S.C. § 103(a)**

Claim 35 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Geier et al. and U.S. Patent No. 6, 474,655 B1 ("Weyl et al."). It is respectfully submitted that the combination of Geier et al. and Weyl et al. does not render unpatentable claim 35 for at least the following reasons.

Claim 35 depends from claim 34 and therefore includes all of the features recited in claim 34. Claim 34, in turn, is allowable for reasons given in support of the patentability of claim 34 in section VI of this response. Therefore, it is respectfully submitted that claim 35 is allowable.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

#### **IX. OBJECTION TO CLAIMS 32 AND 34**

Claims 32 and 34 were objected to as being dependent upon a rejected base claim, but were deemed allowable if written in independent form to include all of the

limitations of their base claim and any intervening claims, and if the objection to claim 18 were overcome.

Claims 32 and 34 have been written in independent form to include all of the limitations of their base claim, i.e., claim 18 (prior to amendment), and the objection to claim 18 has been successfully overcome (see section III of this response). Therefore, it is respectfully submitted that claims 32 and 34 are allowable, and withdrawal of this objection is respectfully requested.

**X. CONCLUSION**

In view of the foregoing, it is respectfully submitted that all of the presently pending, non-withdrawn claims are allowable. It is therefore respectfully requested that the rejections and objections be withdrawn, since they have been obviated. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is respectfully requested.

Respectfully submitted,  
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